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10/017,495	12/14/2001	Cuie Zhao	3343/11046	5644

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EXAMINER

TRUONG, LECHI

ART UNIT

PAPER NUMBER

2194

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/017,495

Applicant(s)

ZHAO ET AL.

Examiner

LeChi Truong

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 3-8 and 11 is/are allowed.
- 6) ☒ Claim(s) 1-2, 9-10, 12-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-24 are presented for the examination.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1, 14, 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1).

3. **As to claim 1**, Ben-Shachar teaches the invention substantially as claimed including: a name service clusters (a service locator that maintains the name space of service instance, col 5, ln 65-67/the set of service locator, col 19, ln 51-55/ the service locator object, col 21, ln 60-65), invoking a cluster (col 6, ln 3-5), establishing name service clusters (col 6, ln 45-46/ col 19, ln 65-67), a unique object table (the RDBMS service, col 5, ln 65-67 to col 6, ln 1-5), object service server reference( the name “ RDBMS service”/ a service name / a set of properties for service, col 6, ln 1-10), establishing name service clusters for the object servers which each contain a unique object binding table( col 5, ln 65-67 to col 6, ln 1-10/ col 9, ln 26-32), in response to a request from client that invokes a cluster( col 9, ln 30-34/ col 11,ln 2-7/ col 12, ln 22-29), performing a load balance by having name service select an object server located in the invoked cluster (col 6, ln 12-

17/ col 10, ln 62-66/ col 11, ln 3-7), a load balance (workload balancing, col 11, ln 12-18), a cluster component to invoked cluster to provide failover upon failure of the object server( col 3, ln 34-40/ col 21, ln 60-65/ col 28, ln 35-39 and ln 54-58), a selected object reference ( the service object handles, col 6, ln 5-9/col 8, ln 63-67/ reservation context, col 26, ln 22-30/ service object , and a set of properties for the service, col 6, ln 5-9), forwarding a selected object reference to a client upon completion of the loading balance ( col 6, ln 5-9/col 8, ln 63-67/ col 11, ln 8-15), server( server 88, Fig. 3), the selected object reference which was forwarded to the client( col 5, ln 60-67 to col 6, ln 3-9/ col 8, ln 63-67), communicating with a server associated with the selected object reference( col 9, ln 30-34/ col 10, ln 39-42/ col 26, ln 23-30), wherein the fault tolerance, the load balance and the failover are performed transparently( col 10, ln 3-7/ col 11, ln 60-63).

4. Ben-Shachar does not explicit teach permitting the client to communication with the server associated with the selected object reference which was forwarded to the clients, binding table. However, Emens teaches permitting the client to communication with the server associated with the selected object reference which was forwarded to the clients (sending a list of mirror servers at the host server, said response being sent from the host to the client, response including the list of mirror server... creating a plurality of mirror server requests at the client computer, each mirror server request corresponding to a mirror server on the list of mirror server... sending the plurality of mirror server requests over the network from the client computer to the corresponding mirror server, col 4, ln 35-45/ col 3, ln 37-45), binding table( address list 36, col 8, ln 52-54).

5. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar and Emens because Emens's permitting the client to communication with the server associated with the selected object reference which was

Art Unit: 2194

forwarded to the clients would improve the efficiency of Ben-Shachar's system by allowing load balancing is accomplished without problems arise from client or name server caching.

6. As to claim 14, Ben-Shachar teaches each object server reference represents a single server (col 8, ln 66- 67 and col 9, ln 1).

7. As to claims 23, 24, they are apparatus claim of claim 1; therefore, they are rejected for the same reason as claim 1 above.

8. Claims 2, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1), applied to claim 1 above, and further in view of JR (java Reflective Broker).

9. As to claim 2, Ben-Shachar and Emens do not teach port number, IP address. However, JR teaches port number, IP address (port number, IP address, page 3 of 16, ln 9-11/page 10 of 16, ln 20-21/ page 6 of 16, ln 14-16).

10. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar, Emens and JR because JR's port number, IP address would improve the efficiency of Ben-Shachar and Emend's systems by allowing a client to be able to invoke a method on a remote object.

11. As to claim 9, Ben-Shachar teaches a load balance algorithm upon creation of a naming service cluster to perform name service load balancing of object references contained within the clusters (col 11, ln 1-6 and ln 12-17).

12. Claims 10, 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1), as applied to claim 1 above, and further in view of Arno (load balancing example).

13. As to claims 10, 12, 13, Ben-Shachar and Emens do not teach load balance based on predetermined method that is a Round robin. However, Arno teaches load balance based on predetermined method that is a Round robin (load balancing strategy like round robin, page 1, ln 27-28).

14. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar, Emens and Arno because Arno's load balancing strategy like round robin would improve the integrity of Ben-Shachar and Emens's systems by allowing a good tool to increase the performance of load balancing.

15. Claims 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1) in view of Rawson et al (US. Patent 5,675,795) and further in view of Nelson et al (US. Patent 5,452,447).

16. As to claim 15, Ben-Shachar teaches a cluster (the set of service locator, col 19, ln 51-55/ the service locator object, col 21, ln 60-65), a context (an RDBMS service, col 5, ln 65-67), invoking a cluster (col 6, ln 3-5), performing a load balance to select an object server located in the invoked cluster (col 6, ln 12-17), establishing name service clusters (col 6, ln 45-46/ col 19, ln 65-67), a unique object table (the RDBMS service, col 5, ln 65-67 to col 6, ln 1-5), object service

Art Unit: 2194

server reference( the name “ RDBMS service”/ a service name / a set of properties for service, col 6, ln 1-10), establishing name service clusters for the object servers which each contain a unique object binding table( col 5, ln 65-67 to col 6, ln 1-10/ col 9, ln 26-32), in response to a request from client that invokes a cluster( col 9, ln 30-34/ col 11,ln 2-7/ col 12, ln 22-29), performing a load balance by having name service select an object server located in the invoked cluster (col 6, ln 12-17/ col 10, ln 62-66/ col 11, ln 3-7), a load babance (workload balancing, col 11, ln 12-18), a cluster component to invoked cluster to provide failover upon failure of the object server (col 3, ln 34-40/ col 21, ln 60-65/ col 28, ln 35-39 and ln 54-58), a selected object reference ( the service object handles, col 6, ln 5-9/col 8, ln 63-67/ reservation context, col 26, ln 22-30), forwarding a selected object reference to a client upon completion of the loading balance ( col 6, ln 5-9/col 8, ln 63-67/ col 11, ln 8-15), server( server 88, Fig. 3), forwarding a selected object reference to a client( col 5, ln 60-67 to col 6, ln 3-9/ col 8, ln 63-67), communicating with a server associated with the selected object reference( col 9, ln 30-34/ col 10, ln 39-42/ col 26, ln 23-30).

17. Ben-Shachar does not teach table as binding table. However, Emens teaches binding table-binding table (address list 36, col 8, ln 52-54).

18. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar and Emens because Emens’s permitting the client to communication with the server associated with the selected object reference which was forwarded to the clients would improve the efficiency of Ben-Shachar’s system by allowing load balancing is accomplished without problems arise from client or name server caching.

19. Ben-Shachar and Emens do not teach setting a flag to activate implicit clustering.

However, Rawson teaches a flag to activate implicit clustering (name service –a flag indicating that the file is a name server, col 6, ln 22-25).

20. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar, Emens and Rawson because Rawson's a flag to activate implicit clustering would improve the efficiency of Ben-Shachar and Emens's systems by providing an improved data processing system.

21. Ben\_shachar, Emens and Rawson do not teach flag in a file. However, Nelson teaches flag in a file (file flag, col 17, ln 25-26).

22. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar, Emens, Rawson and Nelson because Nelson's file flag would improve the use of Ben-Sharchar, Emens and Rawson's systems by providing results of caching operating.

23. **As to claim 16**, Nelson teaches a configuration file (col 14, ln 1-10).

24. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al (US. Patent 6,606,643 B1), in view of Rawson et al (US. Patent 5,675,795) in view of Nelson et al (US. Patent 5,452,447), as applied to claim 15, and further in view of JR (java Reflective Broker).



Art Unit: 2194

25. As to claim 17, Ben-Shachar, Emens, Rawson and Nelson do not teach port number, IP address. However, JR teaches port number, IP address (port number, IP address, page 3 of 16, ln 9-11/page 10 of 16, ln 20-21/ page 6 of 16, ln 14-16).

26. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar, Emens, Rawson, Nelson and JR because JR's port number, IP address would improve the flexibility of Ben-Shachar, Emens, Rawson and Nelson's systems by allowing a client to be able to invoke a method on a remote object.

27. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens( US. Patent 6,606,643 B1), in view of Rawson et al (US. Patent 5,675,795) in view of Nelson et al (US. Patent 5,452,447), as applied to claim 15 above, and further in view of Arno (load balancing example).

28. As to claims 18, 19, Ben-Shachar, Emens, Rawson and Nelson do not teach load balance based on predetermined method that is a Round robin. However, Arno teaches load balance based on predetermined method that is a Round robin (load balancing strategy like round robin, page 1, ln 27-28).

29. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar, Emens, Rawson, Nelson and Arno because Arno's load balancing strategy like round robin would improve the efficiency of Ben-Shachar, Emens, Rawson, Nelson's system by allowing a good tool for increasing the performance of load balancing.

30. Claims 20, 21, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al (US. Patent 6,209,018 B1) in view of Emens et al ( US. Patent 6,606,643 B1) in view of Rawson et al (US. Patent 5,675,795) in view of Nelson et al (US. Patent 5,452,447), as applied to claim 1 above, and further in view of Nessett et al (US. Patent 5,742,759).

31. As to claim 20, Ben-Shachar, Emens, Rawson and Nelson do not teach object reference binding having identical names is clustered together. However, Nessett teaches object reference binding having identical names is clustered together (bind group identification to a target object, col 3, ln 15-17).

32. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar, Emens, Rawson, Nelson and Nessett because Nessett's bind group identification to a target object would improve the efficiency of Ben-Shachar, Emens, Rawson and Nelson's systems by avoiding the costly transaction costs of communicating with the server for the target object.

33. As to claim 21, Ben-Shachar teaches a loading balance algorithm to perform load balancing of object references (col 11, ln 12-16).

34. As to claim 22, it is apparatus claim of claim 19; therefore, it is rejected for the same reason as claim 19 above.

***Allowable Subject Matter***

35. Claims 3-8, 11 are allowed.

**Response to the argument**

36. Applicant's arguments filed 06/03/2005 have been considered but are moot in view of the new ground(s) of rejection. Applicant amended the claims. Emens's reference meets the amended claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (571) 272 3767. The examiner can normally be reached on 8 - 5.

Art Unit: 2194

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

LeChi Truong

August 31, 2005

  
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